Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L17	L16 same l4	24	L17
L16	l15 same l10	86	L16
L15	L14 with l2 with l9	1833	L15
L14	dna or nucleic	205382	L14
L13	L12 and l3	3	L13
L12	L11 same l4	14	L12
L11	L10 with l9 with l2	53	L11
L10	plasmid or vector or carrier	1281636	L10
L9	hybridized or binds or bound	495494	L9
L8	l6 with l2	3	L8
L7	L6 with l5	0	L7
L6	plasmid with hybridized	1516	L6
L5	l4 with l2	487	L5
L4	conjugated or target sequence	118313	L4
L3	NLS	1690022	L3
L2	peptide nucleic acid or PNA	29023	L2
DB=USPT; PLUR=YES; OP=ADJ			
L1	6165720	4	L1

END OF SEARCH HISTORY

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=> d his

     (FILE 'MEDLINE, CANCERLIT, EMBASE, BIOTECHDS, CAPLUS' ENTERED AT 20:50:36
     ON 08 OCT 2003)
                DEL HIS
L1          14085 S PEPTIDE NUCLEIC ACID OR PNA
L2        1015304 S HYBRIDIZ? OR COMPLEME?
L3        2455160 S PLASMID OR NUCLEIC OR DNA
L4         276017 S PLASMID
L5             93 S L4 AND L2 AND L1
L6        2285686 S CONJUGA? OR COMPLEX
L7             42 S L6 AND L5
L8             31 DUP REM L7 (11 DUPLICATES REMOVED)

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L8 ANSWER 26 OF 31 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 6

AN 1999272650 EMBASE

TI A **peptide nucleic acid**-nuclear localization signal fusion that mediates nuclear transport of DNA.

AU Branden L.J.; Mohamed A.J.; Smith C.I.E.

CS L.J. Branden, Center for BioTechnology, Department of Biosciences, Karolinska Institutet, SE-14157 Huddinge, Sweden. lars.branden@cbt.ki.se

SO Nature Biotechnology, (1999) 17/8 (784-787).
Refs: 14
ISSN: 1087-0156 CODEN: NABIF

CY United States

DT Journal; Article

FS 027 Biophysics, Bioengineering and Medical Instrumentation
029 Clinical Biochemistry

LA English

SL English

AB We have combined a **peptide nucleic acid** (**PNA**) with the SV40 core nuclear localization signal (NLS), to create a bifunctional **PNA**-NLS peptide. The **PNA**- NLS peptide increased the nuclear uptake of oligonucleotides and enhanced the transfection efficacy of plasmids. Gene expression from an enhanced green fluorescent protein **plasmid** and a lacZ **plasmid** was preserved when **hybridized** to **PNA**-NLS. In combination with the transfection agent polyethyleneimine, we have improved both the nuclear translocation of fluorescence-marked oligonucleotides, and the efficacy of **plasmid** transfection, up to eightfold. The technique obviates the use of cumbersome coupling procedures of the vector due to DNA-**PNA** duplex formation or displacement of the antisense **plasmid** DNA strand by a **PNA** molecule.

L8 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:219937 CAPLUS
DN 130:233243
TI Complexes of nucleic acid with **p ptide nucleic acid conjugates** and their uses
IN Felgner, Philip L.; Zelphati, Oliver; Bennett, C. Frank
PA Gene Therapy Systems, Inc., USA; Isis Pharmaceuticals, Inc.
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9913719	A1	19990325	WO 1998-US19503	19980918
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2303908	AA	19990325	CA 1998-2303908	19980918
	AU 9895708	A1	19990405	AU 1998-95708	19980918
	EP 1014790	A1	20000705	EP 1998-949373	19980918
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2001516562	T2	20011002	JP 2000-511361	19980918
	US 6165720	A	20001226	US 1998-224818	19981230
PRAI	US 1997-59215P	P	19970918		
	US 1998-87815P	P	19980529		
	US 1998-87815	A	19980529		
	WO 1998-US19503	W	19980918		

AB Complexes comprising a nucleic acid mol. and a **conjugated peptide nucleic acid** (**PNA**) are disclosed. The **PNA** may be labeled or **conjugated** to a protein, peptide, carbohydrate moiety or receptor ligand. These complexes are used to transfect cells and to monitor **plasmid** biodistribution, promote nuclear localization, induce transcriptional activation, lyse the endosomal compartment and facilitate transfection. These complexes increase the efficiency of expression of a particular gene. Thus, reporter gene-contg. **plasmid** complexed with **PNA**-rhodamine or **PNA**-fluorescein **conjugates** were prepd. These complexes were very stable in vitro and in vivo, they were not cleaved significantly by nucleases, and the presence of the **PNA** did not affect the biol. activity of the **plasmid**.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:191243 CAPLUS
DN 132:217994
TI Transfer method using a novel synthetic transport entity for specific cellular localization of nucleic acids
IN Branden, Lars; Mohamed, Abdalla J.; Smith, C. I. Edvard
PA Karolinska Innovations A.B., Swed.
SO PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000015824	A1	20000323	WO 1999-SE398	19990315
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9931784	A1	20000403	AU 1999-31784	19990315
	EP 1114172	A1	20010711	EP 1999-913793	19990315
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002525066	T2	20020813	JP 2000-570351	19990315
PRAI	SE 1998-3099	A	19980913		
	WO 1999-SE398	W	19990315		

AB The present invention relates to a novel method of genetic modification, wherein a nucleic acid of interest is transferred across a biol. membrane, and/or directed to a specific location within or on a cell, by use of a synthetic transport entity. The transport entity according to the invention is new as such and produced by coupling a functional element (FE), such as a nuclear localization signal (NLS), an antennapedia peptide of a protein comprising both membrane translocation and nuclear transport properties, to a binding element (BE), such as a **peptide nucleic acid** (**PNA**), preferably sepd. by a linker mol., which combination is then **hybridized** to a BE target sequence present on a carrier, which also includes the nucleic acid of interest. The present nucleic acid of interest may for example be a gene encoding a peptide, a protein or an RNA, or any other nucleic acid useful in genetic recombination events.